Yosemite Valley School Yard Culvert Replacement

Where is the project located?

The storm drain culvert replacement project site is located in the southwest end of the Yosemite Elementary School playground and ball field. This culvert collects storm water from the National Park Service stables and maintenance areas located behind the Yosemite Valley Visitor Center.

Why undertake this project?

Heavy rains in late 2004 caused water to back up into a collection box near the elementary school so that the storm water overflowed onto the school playground and ball field. This flooding made the schoolyard unusable and unsafe during stormy weather. During December, park crews made several unsuccessful attempts to clean out the plugged corrugated metal drainage culvert. During this work, it was discovered that the bottom of the pipe had rusted out at several locations. At this point, the project manager requested that the existing culvert be completely replaced to restore proper drainage and alleviate the problem in the school playground and ball field.

What did this project include?

Improvements to the drainage system at the elementary school include:

- Replacing 400- feet of the existing 15- inch corrugated metal pipe with an 18- inch corrugated metal pipe
- Excavation and removal of sediments from the existing drainage outfall and basin area
- Replacing one existing manhole
- Replacing one existing headwall, and
- Replacing the existing frame and cover of one manhole.

These improvements will stop the discharge onto the school playground and ball field and allow the storm water to flow into a contained basin area (a “bioswale”) as intended. Additionally, a sand trap and catch basin were installed at the sand storage area to help minimize the amount of sediment flowing into and clogging the storm drain system, and “Best Management Practices” for corral operations were implemented to help minimize the amount of corral runoff entering the storm- drain system.

How does the drainage basin and new culvert relate to their original locations?

The drainage basin that was excavated is actually the old drainage channel that carried the storm water flow between the former outfall headwall and Yosemite Creek. The re-excavated area was limited to one- half of the original channel length in order to create an actual basin—a “bioswale”—to contain storm water flows, allowing them to percolate into the ground and preventing the direct discharge of storm water into Yosemite Creek. Also, the new replacement culvert was placed in the same location as the former corrugated metal pipe; however, the new corrugated metal pipe was enlarged from 15” diameter to an 18” diameter. The bottom of the pipe is at the same depth as the old pipe (this depth- limit was caused by existing water and sewer lines crossing underneath the drainage culvert).

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What is the history of this project?

The initial project to unclog the pipe began in December of 2004. When it was discovered in January 2005 that the culvert was completely plugged and overflowing from a collection box onto the school playground and ball field, the culvert was recommended for replacement. This larger project began with design research, review, and discussions with specialist from the park staff and private consultants.

Preparation for this project also included consultation with the California Regional Water Quality Control Board, which expressed no concerns with its scope and details. A categorical exclusion was signed on July 6, 2005. To minimize conflict with the school children, construction began on October 24, 2005 during a school recess week and construction was completed on November 4, 2005.

During pipe replacement in fall 2005, soil samples were taken and are being tested for contaminants. Previous tests had not shown any exceedances of state regulatory levels for contaminants.

Additionally, Yosemite National Park recently finalized a **Storm Water Management Plan** for the park. This plan describes a comprehensive program to reduce pollution in storm water runoff through the implementation of six management elements:

- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post- Construction Storm Water Management in New Development and Redevelopment and Pollution Prevention
- Good Housekeeping of Park Operations
- Public Education and Outreach
- Public Involvement

Public Participation

Here are some ways to learn more and stay involved:

- Attend a National Park Service's public open house to talk with project specialists and obtain more information about ongoing and future park projects.
- Check our website regularly at *www.nps.gov/planning* for new fact sheets, meeting dates, and copies of all categorical exclusions (such as for this project).
- Add your name to the park's mailing list (to address/fax/email below) and receive planning-related notices. You can also submit your email address to receive Yosemite National Park's periodic electronic newsletter.

Mail: Superintendent
Attn: Planning Mailing List
P.O. Box 577
Yosemite, CA 95389

Fax: 209/379- 1294

Email: YOSE_Planning@nps.gov

The status of other Yosemite National Park improvement projects will be periodically updated online: *www.nps.gov/yose/planning*.